

## WHAT IS CLAIMED IS:

1. A printing apparatus for performing printing on a printing medium by reciprocally scanning a carriage to which a printhead having a plurality of printing elements is mounted, said printing being performed during acceleration, deceleration, and constant-speed movement of the carriage, said apparatus comprising:
- a buffer storing print data to be used in a printing operation for one scan;
- counting means for counting at least a part of the print data, stored in said buffer, which causes the printhead to perform a printing operation during acceleration of the carriage;
- comparison means for comparing a counted value, counted by said counting means, with a predetermined threshold value; and
- control means for controlling to change a number of printing elements of the printhead to be used in a printing operation for one scan of the carriage, based on a comparison result of said comparison means.
2. The apparatus according to claim 1, wherein said counting means divides said buffer into a plurality of areas, and among the divided plurality of areas, performs counting on an area storing print data to be used by the printhead during acceleration of the

carriage.

3. The apparatus according to claim 1, further comprising:

5 a DC motor for driving the carriage; and  
a power source for supplying electric power to  
the printing apparatus.

4. The apparatus according to claim 3, wherein the  
10 number of printing elements of the printhead to be used  
in a printing operation for one scan of the carriage,  
which is controlled by said control means, satisfies a  
condition such that a sum of a driving current required  
for driving said number of printing elements and a  
15 driving current supplied to the DC motor for  
accelerating the carriage is equal to or lower than a  
capacity of the power source.

5. The apparatus according to claim 4, further  
20 comprising determining means for determining whether or  
not the power source is an AC power source or a battery  
power source,

and wherein, in a case where it is determined by  
said determining means that the power source is a  
25 battery power source, controlling is performed by said  
control means.

6. The apparatus according to claim 1, wherein said control means controls to perform multi-pass printing.

7. The apparatus according to claim 1, wherein the  
5 printhead is an inkjet printhead which performs printing by discharging ink.

8. The apparatus according to claim 7, wherein said inkjet printhead comprises an electrothermal transducer  
10 for generating heat energy to be applied to ink, so as to discharge ink utilizing the heat energy.

9. A printing apparatus for performing printing on a  
printing medium by reciprocally scanning a carriage, to  
15 which a printhead having a plurality of printing elements is mounted, by driving force of a carriage motor, said printing being performed during acceleration, deceleration, and constant-speed movement of the carriage, said apparatus comprising:

20 a buffer storing print data to be used in a printing operation for one scan;

counting means for counting at least a part of the print data stored in said buffer, which causes the printhead to perform a printing operation during  
25 acceleration of the carriage;

acquisition means for acquiring data regarding power consumption of the carriage motor during

acceleration or deceleration of the carriage;

addition means for adding the data regarding power consumption of the carriage motor acquired by said acquisition means to data regarding power

- 5 consumption of the printhead which is obtained from a counted value counted by said counting means;

comparison means for comparing a value, obtained by said addition means, with a predetermined threshold value; and

- 10 control means for controlling to change a number of printing elements of the printhead to be used in a printing operation for one scan of the carriage, based on a comparison result of said comparison means.

- 15 10. The apparatus according to claim 9, wherein said comparison means changes the predetermined threshold value in accordance with a moving direction of the carriage.

- 20 11. A printing control method adopted for performing printing on a printing medium by reciprocally scanning a carriage to which a printhead having a plurality of printing elements is mounted, said printing being performed during acceleration, deceleration, and  
25 constant-speed movement of the carriage, said method comprising:

a storing step of storing into a buffer print

data to be used in a printing operation for one scan;

a counting step of counting at least a part of the print data, stored in the buffer in said storing step, which causes the printhead to perform a printing  
5 operation during acceleration of the carriage;

a comparison step of comparing a counted value, counted in said counting step, with a predetermined threshold value; and

a control step of controlling to change a number  
10 of printing elements of the printhead to be used in a printing operation for one scan of the carriage, based on a comparison result of said comparison step.

12. A printing control method adopted<sup>4</sup> for performing  
15 printing on a printing medium by reciprocally scanning a carriage, to which a printhead having a plurality of printing elements is mounted, by driving force of a carriage motor, said printing being performed during acceleration, deceleration, and constant-speed movement  
20 of the carriage, said method comprising:

a storing step of storing into a buffer print data to be used in a printing operation for one scan;

a counting step of counting at least a part of the print data, stored in the buffer in said storing  
25 step, which causes the printhead to perform a printing operation during acceleration of the carriage;

an acquisition step of acquiring data regarding

power consumption of the carriage motor during  
acceleration or deceleration of the carriage;

an addition step of adding the data regarding  
power consumption of the carriage motor acquired in  
5 said acquisition step to data regarding power  
consumption of the printhead which is obtained from a  
counted value counted in said counting step;

a comparison step of comparing a value, obtained  
in said addition step, with a predetermined threshold  
10 value; and

a control step of controlling to change a number  
of printing elements of the printhead to be used in a  
printing operation for one scan of the carriage, based  
on a comparison result of said comparison step.

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